SUMMARY OF REGIONAL STRATEGIC PLANS FOR OCEAN AND GREAT LAKES PARKS[1]

1. Establish a Seamless Network of Ocean and Great Lakes Parks, Sanctuaries, Refuges, and Reserves

Numerous federal, state and local agencies, and conservation-oriented organizations, share common mandates for protection of marine resources. Through enhanced collaboration, each agency could more effectively and efficiently achieve their ocean stewardship goals and responsibilities.

GOAL: Facilitate partnership opportunities among federal, state, tribal, and local agencies and non-government organizations toward enhanced marine resource conservation and education

- Convene multi-agency workshops to identify: a) common stewardship responsibilities; b) priority marine resource threats; c) common priority research, inventory and monitoring needs; d) environmentally sensitive resources and focus on common priority resources; e) the capacity for sharing of resources (e.g., personnel, facilities, personnel); and to f) highlight opportunities among parks, refuges, sanctuaries, reserves, state/local conservation areas that will embrace the seamless network concept. [NER, PWR/AKR]
- Become involved in regional, national, and international collaborative efforts and interagency partnerships that foster proactive ocean and coastal stewardship. [SER, PWR/AKR, MWR]
- Develop cooperative agreements with state and federal agencies to exercise the highest level of protected area resource stewardship regardless of ownership. Strengthen relationships with agencies and organizations doing *place-based* conservation and working on regional *thematic issues* that influence park conservation or management. [MWR, SER]
- Develop site-based partnerships with National Marine Sanctuaries, Estuarine Research Reserves, and National Wildlife Refuges, and resolve administrative and financial obstacles. Promote research to evaluate the importance of marine reserves. Establish a committee to evaluate how to attract research organizations (housing, vessels, databases, permitting, etc.). [PWR/AKR]
- Collaborate with state, provincial, and local governments to establish Marine Protected Areas (MPAs) within and/or adjacent to NPS units and pursue the establishment of Marine Reserves within these MPAs. [PWR/AKR, MWR]
- Create opportunities to co-locate agency personnel to facilitate collaboration and implementation of the seamless network concept. [NER, PWR/AKR]
- Work proactively with other federal agencies in preplanning efforts (e.g., renewable energy, aquaculture, and marine shipping). [PWR/AKR]
- Better use multi-agency visitor centers. [MWR]

GOAL: Facilitate partnership opportunities with neighboring countries (Canada, Mexico, and Pacific Islands) and non-government organizations to enhance marine resource conservation and education.

- Work with the NPS Office of International Affairs to facilitate cooperation between the NPS and park and protected area agencies throughout the Pacific and Arctic Oceans. [PWR/AKR]
- Collaborate with the regional environmental programs and NGOs on conservation efforts and sustainable development initiatives. Most of these efforts are working independently; successful conservation requires cooperative action [PWR/AKR, MWR]

[1] MWR = *Midwest Great Lakes Strategy, Conserving National Park Resources on America's Freshwater Coast.* October 2008. NER = *Northeast Region Ocean Park Strategic Plan: Conserving Coastal and Marine Resources*. June 2007. PWR/AKR = *Pacific Ocean Parks Strategic Plan: Conserving Our Coastal, Island and Marine Resources*. April 2008. SER = *Southeast Region Coastal and Ocean Park Strategy.* March 2007.

- Work with Canada's Fisheries and Oceans Canada, Parks Canada, and Environment Canada, which have jurisdiction over marine reserve planning and implementation. [PWR/AKR, MWR]
- Build sister park relationships throughout the Pacific and Arctic Oceans [PWR/AKR]

2. Discover, Map, and Protect Ocean Parks

NPS knowledge of natural and cultural resources in terrestrial areas of ocean parks is relatively robust, but our information base is limited for submerged portions, which are often major park components. Bathymetry, sediment, and habitat maps are critical for park managers to design effective resource protection strategies, identify restoration needs, monitor resources, and provide recreation opportunities. Submerged archeological resources from the exploration, colonization, and development of commerce are increasingly actively managed, yet the location and status of most of these resources are not documented. Our understanding of the response of submerged resources to climate change (e.g., sea-level rise, changing storm frequencies and intensities, changing salinity and temperature) and other stresses (e.g., nutrient input, fishing) must be strengthened to support science-based management decisions.

GOAL: Inventory and map natural and cultural resources within the submerged boundaries of ocean and Great Lakes parks

- Prepare a plan to inventory and map submerged natural and cultural resources in parks and adjacent areas. Compile existing hydrographic and benthic data, identify gaps, and develop a plan to collect needed information. Identify inventory and mapping technologies. [NER, PWR/AKR, MWR, SER] Develop a GIS-based characterization of parks and how they are changing over time. Map significant resources and habitats that extend across park boundaries. [MWR]
- Conduct benthic habitat classification and mapping in all freshwater parks. Develop resource maps that include lake bathymetry, nearshore benthic habitat, lake bed classification, sedimentology and geomorphology, water quality, and submerged cultural resources. Conduct baseline biological and cultural inventories and long-term monitoring to ensure effective resource management as effects of climate change and species invasions become more apparent. [MWR]
- Conduct archeological assessments for submerged cultural resources (shipwrecks and other archeological sites). Consolidate existing information on location, status, and historical/cultural significance and propose follow-up studies to discover unknown cultural resources. [NER, PWR/AKR] Coordinate assessments with NPS Submerged Resources Center and Midwest Archeological Center. Collect cultural resource data in new hydrographic surveys. [MWR]
- Define linkages among submerged cultural resources, cultural landscapes, and historic structures to develop a holistic approach to stewardship of maritime-related resources. [NER, PWR/AKR]
- Coordinate Regional mapping plans with NRPC/WRD/OCRB pilot benthic habitat mapping and classification projects to develop the NPS Service-wide Marine Benthic Habitat Mapping Program. Support interagency (NPS-USGS) pilot studies. [MWR, PWR/AKR]
- Pursue a Centennial Challenge Signature project for a program to inventory and map submerged natural and cultural resources, determine resource condition, and develop protection strategies. Develop a strategy between NPS units and corresponding National Marine Sanctuaries for biogeographical assessments similar to those for CHIS and the Farallones Islands. Incorporate the information into the "Encyclopedia of Life." [NER, PWR/AKR]
- The S. Florida/Caribbean, Southeast Coast, and Gulf networks are well underway with plant and animal inventories and are implementing long-term monitoring programs. The networks will help parks incorporate the information into management and make it available to the public to increase visitor understanding and stewardship of resources. Information and recommendations from Watershed Condition Assessments will lead to more informed management and planning. [SER]
- Coordinate mapping efforts with NOAA Northwest Fisheries Science Center and UNH Center for Coastal and Ocean Mapping. Coordinate with North Slope Science Initiative (NSSI) on research, inventory, and monitoring related to development of Alaska's North Slope; anticipated loss of sea ice in the Arctic Ocean; and increase of energy, shipping, tourism, and fishing. [PWR/AKR] Seek

assistance from Great Lakes agencies to fill high priority gaps in the NPS vital signs inventory and monitoring program. [MWR]

GOAL: Understand and quantify threats to natural and cultural submerged resources identify impaired or threatened resources, and develop mitigation or restoration strategies.

- Conduct park natural resource/watershed condition assessments that evaluate stressors and threats. [NER, MWR, PWR/AKR] Encourage development of consistent stressor indicators for coastal resources. [MWR] Use condition assessments to identify priority threats and gaps in resource knowledge, and identify commonalities among parks and regions. [PWR/AKR]
- Monitoring programs developed by I&M networks will help identify the need for studies on: 1) coral bleaching; 2) decreased fish stocks; and 3) carrying capacities and impacts to sensitive marine resources, such as seagrass beds and shoals frequented by mariners. [SER]
- Inventory existing marine and coastal resource mitigation/restoration projects for natural and cultural resources and ensure scientifically defensible measures of evaluation. Highlight successful projects as models for restoration of impaired resources. [NER, MWR, PWR/AKR] For example, wetlands at Indiana Dunes, coaster brook trout at Isle Royale, coastal processes at Pictured Rocks. [MWR]
- With USGS, initiate studies that enhance understanding of natural and cultural resource responses to threats and global change (e.g., sea level rise, increasing ocean temperature, changing storm frequencies and intensity). [NER] Initiate studies of mitigation measures to respond to threats to natural and cultural resources and responses to global climate change. [PWR/AKR] Collaborate on studies to address priority resource issues shared among Great Lakes parks (e.g., effects of changing climate and lake levels on infrastructure, natural resources, and submerged cultural resources; effects of contaminants and aquatic invasive species in coastal waters). [MWR]
- Develop long-range strategies for adapting to climate change; use 'scenario planning' to explore potential future conditions and management options. [MWR]
- Identify emerging coastal issues and develop synthesis papers addressing the state of the science; impacts on park resources, operations, and visitor experiences; and management strategies. Incorporate analyses in park planning and coordinate with agencies, states, tribes. [MWR]
- Work with MMS to identify potential offshore alternative energy locations and initiate studies to enhance understanding of natural and cultural resources, park operations, and visitor impacts associated with development. [PWR/AKR] Raise awareness of potential energy development near parks. Evaluate and assess trade-offs between sustainable energy development and protection of NPS viewsheds and resources [MWR]
- Work with NOAA to identify and initiate studies aquaculture and potential threats associated with its development in and adjacent to parks. [PWR/AKR]
- Evaluate the Research Natural Area concept to facilitate submerged research opportunities to evaluate the effectiveness of conservation methods, and to increase public awareness of the seashore's role in ocean stewardship. [NER] Expand on the efforts of PORE which is evaluating, with partners, the establishment of Marine Reserves and Protected areas as directed by the California Marine Life Protection Act [PWR/AKR]
- Cooperate with states and tribes to identify significant submerged cultural resources just outside national park boundaries. Develop cooperative strategies for resource protection and public access and enjoyment, and consider boundary changes to include vulnerable resources. [MWR]
- Encourage a Service-wide policy discussion on the use of organic fishing bait within national parks, particularly in multi-jurisdictional coastal areas. [MWR]

GOAL: Expand understanding of ocean and Great Lakes park boundaries, jurisdictions, and authorities.

Enhanced NPS presence in marine environments can be accomplished through expanded boat patrols, labeling park boundaries on maps, and visitor education programs to reinforce the message that NPS is committed to marine resource stewardship. A clear understanding of submerged marine resource

jurisdictions and authorities is required for effective protection of ocean parks and to establish cooperative programs with local, state, and federal partners (seamless network concept).

- Convene a workshop for park managers to inventory and clarify park maritime jurisdictional issues regarding the Submerged Lands Act, Coastal Zone Management Act, Renewable Energy Act, Aquaculture Act (pending), Abandoned Shipwreck Act, etc. Coordinate with DOI Solicitor's Office. [NER, MWR, PWR/AKR, SER]
- Work with DOI WASO and Regional Solicitor's Office to provide guidance for managing park resources that may be inundated by future sea level rise. [MWR, PWR/AKR]
- Facilitate preparation of Solicitor's opinion on boundaries, jurisdictions, and authorities for each park, including consumptive uses (fishing, shellfishing, kelp harvesting, etc.), submerged cultural resources, [NER, MWR, PWR/AKR], whether boundaries are fixed or move with changing lake levels, whether boundary definitions need to change to protect resources. [MWR] DOI Regional Solicitor's Office clarified jurisdictional issues for fishing/shellfishing at FIIS. [NER]
- Convene a meeting of NPS and US Coast Guard to discuss issues of mutual interest, such as ballast water management, aids to navigation, search and rescue, and spill response. Work with states and agencies to resolve jurisdiction by agreements that allow the highest level of management and resource protection. [MWR]

GOAL: Increase the National Park Service (and other agencies) ocean and marine presence

- Include park boundaries on digital and paper nautical charts. Evaluate the need for buoys and published GPS waypoints for park boundaries. [NER, MWR, PWR/AKR] Interact with state and local agencies, sportfishing and bait shops, recreational boating organizations to display park boundaries on fishing maps, recreation guides, Websites, tide charts, etc. [NER, PWR/AKR]
- Promote and expand joint marine enforcement patrol operations with other agencies. Identify a law enforcement ranger at each park to serve as a liaison with nearby marine enforcement agencies to maintain communication and plan regular patrols. [NER, PWR/AKR]
- Enhance NPS presence through expanded boat patrols and visitor education that reinforce the message that the NPS is committed to marine resource stewardship. [PWR/AKR]
- Establish an ocean park network of strategically located telephone "tip lines" (e.g., boat launches, bait shops, public docks, visitor centers) to facilitate reporting of marine violations and to reinforce the NPS message of ocean stewardship. [NER, PWR/AKR]

GOAL: Expand natural resource vital signs monitoring program for ocean and estuarine resources.

- Convene a workshop to identify priority monitoring needs to quantify and understand changes in processes, biota, and/or stressors in estuarine, nearshore, and ocean to complement ongoing vital signs monitoring focused on shoreline change, salt marsh habitats, rocky intertidal habitats, response of estuaries to nutrient enrichment, temperature change, and pH. [NER, PWR/AKR]
- Highlight 1-2 vital signs that characterize current conditions and/or threats to submerged park natural resources (e.g., trends in fish landings or shellfish bed closures, occurrence of non-native marine species, land use changes, climate change factors). [NER, PWR/AKR]
- Increase NPS funding and staffing for marine research and monitoring to ensure a commitment to long-term needs. Invest in existing and new technologies, and partner with other agencies for more comprehensive inventories and monitoring. [PWR/AKR]
- Inventory existing marine and coastal monitoring programs implemented at national, state, and local scales; determine if they are appropriate for the NPS and NPS participation. [PWR/AKR]
- Collaborate with NOAA to develop vital sign parameters for offshore marine waters, and integrate with NOAA's Ocean Ecosystem Indicators. Use regional ocean observing alliances under the Integrated Ocean Observing System (IOOS) to advocate for data relevant to local scales and resource managers. [PWR/AKR]
- Work with established programs (e.g., South Pacific Regional Environmental Programme, Global Coral Reef Monitoring Network) to track change and condition of marine resources. Expand the

role of NPS in Alaska Ocean Observing System (AOOS) to improve climate change predictions and effects on coastal populations, effectively protect and restore healthy coastal marine ecosystems, and enable the sustained use of marine resources [PWR/AKR] and the Southeast Aquatic Resources Partnership and the Gulf of Mexico Regional Partnership. [SER]

GOAL: Proactively inform park management and the public of emerging issues that could impact the status and function of marine resources. Identify strategies to address these issues.

Effective long-term conservation of park marine resources depends on implementation of planning strategies that anticipate issues that will be confronting ocean and coastal parks. Planning tools relevant to marine resource stewardship must be embraced and incorporated into park planning efforts.

- Prepare synthesis papers on emerging issues [e.g., alternative energy development (wind turbines, wave and tidal power), liquefied natural gas facility siting, aquaculture, invasive species, fishing pressure, coastal development pressure, shoreline stabilization, dredging, sea level rise, etc.]. Discuss expected impacts on cultural and natural resources, park operations, and visitor experiences, and regulatory, planning, and other strategies to address these issues. Develop a workplan within one year for every coastal park to work with the WASO Climate Change Coordinator to model sea level rise. Use scenario-building to identify natural resources, cultural resources, subsistence resources, and infrastructure that may be threatened. [NER, PWR/AKR]
- Write guides describing planning methods that may be available to enhance conservation of park resources, including special designations such as outstanding national water resources, marine reserves, etc. [NER, PWR/AKR]
- Engage in state and local watershed planning; encourage implementation of smart-growth and best management practices, and conservation easements that will lessen the impacts of development outside parks and impacts of within park extractions. [NER, PWR/AKR]
- Generate forecasts based on trends in status of marine resources for visitor centers to educate the public on the effect of stressors, such as global climate change, on ocean resources. [PWR/AKR]
- Develop easily interpreted guidelines for viewing marine seabirds and mammals that can be distributed to boat-based visitors to NPS units. [PWR/AKR]

GOAL: Ensure that park-specific ocean stewardship issues and knowledge of natural and cultural resources are available and synthesized for planning teams.

- In advance of GMP process, identify key issues and prepare papers that synthesize and interpret available literature; describe historic and current management, regulatory, and other activities; and identify gaps in current knowledge. [NER, PWR/AKR] Synthesis papers developed prior to the FIIS GMP process were useful references for the planning team and the public. [NER]
- Develop a strategy to ensure that parks are able to maintain and replace vessels and related assets to prevent the loss of capability over time. [PWR/AKR]

GOAL: Increase understanding and awareness of maritime cultural resources in Great Lakes national parks, highlighting their role and collective importance in the development of the continental nation.

- Examine NPS maritime resources in the history of navigation and development across the Great Lakes and interaction with Atlantic maritime themes. Prepare National Historic Landmark and Maritime Landscape documentation based on the findings. [MWR]
- Develop an initiative with resource management partners to accelerate critical Historic Structure Reports, Cultural Landscape Reports, cultural resource property management plans, site inventories and condition assessments to define preservation priorities and identify funding needs and fundraising opportunities. [MWR]
- Develop preservation treatment and long-term stewardship strategies for significant maritime cultural resources. [MWR]

3. Engage Visitors and the Public in Ocean Park Stewardship

Ocean and coastal parks are extraordinary venues to communicate stewardship messages. The status of coastal and ocean ecosystems, climate change and expected societal consequences, daily habits that promote ocean resource conservation, and innovative ocean resource protection will enhance awareness of critical marine resource issues. On-site and virtual park visitors, neighbors, teachers, students, park staff, and volunteers can be reached with a variety of education and communication techniques.

GOAL: Create a communication strategy to better inform the public on topics of ocean stewardship

- With ocean park interpretive staff, assess outreach and education actions, and develop communication strategy that identifies key ocean stewardship messages, core audience interests, and preferred media approaches. Information must be communicated in a manner that recognizes complexity of technical and policy issues that confront park managers. NER, PWR/AKR, SER]
- Consider an iconic species (e.g., humpback whale) as a branding/thematic element in exhibits. Create a film for visitor centers to deliver awareness, stewardship strategy, and connectivity of Pacific Ocean parks. [PWR/AKR]
- Work with NSF Centers for Ocean Education Excellence, which supports partnerships among ocean researchers, educators, and science organizations, to provide the public a deeper understanding of the ocean, and its effect on quality of life and national prosperity. [PWR/AKR]
- Engage with civic organizations and schools and participate in education and outreach opportunities, such as Coastal America and Learning Centers, to share information and build knowledge of coastal and marine resources. [SER}

GOAL: Enhance awareness and understanding of ocean stewardship issues through the development of interpretive materials and recreational opportunities

- Develop generic interpretation materials and templates articulating key ocean stewardship messages and concepts for use in brochures, PowerPoints, displays, Web pages, and audio/visual outlets). [NER, PWR/AKR, MWR] Encourage INDU Great Lakes Research and Education Center to develop interpretive educational materials/templates for *all* Great Lakes parks. [MWR]
- Evaluate the effectiveness of education and outreach approaches to advance ocean stewardship messages and capitalize on the evaluation strategy in the Interpretation and Education Renaissance Action Plan. [NER, PWR/AKR]
- Develop an annotated list of sources of ocean stewardship interpretive information and potential partners involved in ocean literacy to avoid duplication, foster connections among parks, and facilitate multi-partner collaborations. [NER, PWR/AKR]
- Work with NPS and DOI to ensure that thematic interpretive and educational materials and programming developed for the Oceans Initiative include the Great Lakes. [MWR]
- Engage regional interpretation ranger advisory committees to develop ocean park stewardship as a central theme, develop and share materials, tap education partners, and build new education partnerships with existing ocean stewardship organizations. [PWR/AKR]
- Require an interpretive/education component for all coastal and maritime resource projects. [MWR]
- Develop publications for the public that summarize the history of submerged cultural resources and their national and international significance. [MWR]
- Develop a thematic, curriculum-based resource guide aimed at teachers and other partners (e.g., local boating and fishing clubs, park friends groups). [NER, PWR/AKR]
- Engage civic organizations and schools by participating in education and outreach opportunities, such as Coastal America and Learning Centers, to share information and build knowledge of coastal and marine resources. [SER]
- Encourage national parks with Artist-in-Residence programs to collaborate on a travelling art exhibit highlighting the beauty of parks and appropriate stewardship messages. [MWR]

- Facilitate development of an ocean park stewardship program at the 2008 conference of the National Science Teachers Association in Boston. Work collaboratively with the NPS NRPC Office of Education and Outreach. [NER, PWR/AKR]
- Promote marine-based programs similar to NSF Faculty Early Career Development that supports pre-tenure researchers who combine research efforts with educational programs. [PWR/AKR]

GOAL: Explore approaches to engage visitors, teachers, and students in the practice of ocean stewardship through experiential learning

- Engage the public in marine bio-blitz programs and incorporate citizens in ocean natural resource monitoring. [NER, PWR/AKR] The Northeast Temperate Network is developing a citizen monitoring protocol for marine intertidal resources at ACAD and BOHA. Investigate active engagement of park recreational fishing communities in tag and release monitoring and research programs sponsored by state agencies, NOAA Fisheries, and academic researchers. [PWR/AKR]
- Work with partners to develop and enhance self-guided water trails (e.g., canoe, kayak, and SCUBA) that inform recreational users of natural and cultural resource significance and ocean stewardship issues in ocean and Great Lakes parks. [NER, MWR, PWR/AKR]
- Develop distance learning for middle and high school students. [NER, PWR/AKR] Model it on Channel Islands Live (1-hour, interactive underwater broadcast from Anacapa Cove into classrooms) and Estuary Live (1-hour, interactive Web field trip to GATE's Jamaica Bay). Expand model throughout regions; move program into INTERNET II for interactive broadcast throughout U.S. [PWR/AKR]
- Sponsor K-12 teacher workshops to facilitate local and distance learning. Develop and make available high-quality ocean and coastal education curricula through the internet. [PWR/AKR]
- Work with the NRPC/WRD/OCRB and Reef Environmental Education Foundation to expand volunteer fish surveys and involvement in park stewardship by divers and snorkelers through the Great Annual Fish Count and NPS Marine Recreational Stewardship Outreach Program. Target GLB, CHIS, KAHO, and National Park of American Samoa. [PWR/AKR]
- Develop partnerships with aquaria and museums in major cities to develop exhibits and interactive displays that increase awareness of ocean and Great Lakes parks, and the significance of resources and stewardship. [MWR, PWR/AKR] Model it after the successful Mississippi National River and Recreation Area. [MWR]
- Engage the lighthouse and shipwreck communities in supporting NPS stewardship opportunities and needs. [MWR]
- Link ocean stewardship messages with Civic Engagement and 21st Century Relevance task groups to maximize public benefit and cultivate new park stewards. [NER, PWR/AKR]
- Work with universities to promote Pacific Ocean parks for programs like NSF Research Experiences for Undergraduates that provide funding to universities and marine laboratories for summer internships to students to participate in ocean research. [PWR/AKR]
- Increase NPS presence at National Ocean Science Bowl competitions where high school students compete for college scholarships and marine science-based field trips/cruises. [PWR/AKR]
- Increase NPS involvement in celebrating Lake Superior Day. [MWR]

GOAL: Demonstrate a commitment to ocean stewardship through adoption of sustainable operations and practices at ocean parks

- Launch a "green marina" initiative at ocean parks as marina concession contracts are negotiated and work collaboratively with local communities to encourage "green harbors" within or adjacent to park boundaries. [NER, PWR/AKR]
- Identify alternative park operation approaches that contribute to sustainability of ocean resources (e.g., re-designed septic systems, designated mooring/anchoring areas). [NER, PWR/AKR]

- Develop a "best practices Website" to share innovative ideas and climate-friendly approaches to park marine operations. [PWR/AKR]
- Develop outreach programs that highlight the consequences of marine engine hydrocarbon emissions and impacts of underwater noise, and promote the use of quieter motors and ecologically sustainable materials/equipment, such as less toxic bottom paints. [PWR/AKR]
- Develop a "conserve your ocean resources" traveling display that demonstrates sustainable actions that contribute to ocean stewardship; use examples from programs implemented in ocean parks. [NER, PWR/AKR]
- Identify public infrastructure in greatest need of maintenance, repair, or protection to support tourism and recreational opportunities/activities. [PWR/AKR]
- Identify ocean and recreational conflicts and safety issues and work with the public, industry, and special interest groups to identify solutions. [PWR/AKR]
- Work with NRPC/WRD/OCRB on an NPS Marine Recreational Stewardship Outreach Program that uses 20% fee funding to develop information on marine recreational visitor use patterns and beliefs. Use outreach and education materials to encourage ocean stewardship amongst boaters, divers, and anglers. [PWR/AKR]

4. Increase Technical Capacity for Ocean Exploration and Stewardship

Ocean and Great Lakes parks have a long history of commitment to resource stewardship and interpretation through assessments, science, protection, education, and planning. However, this dedication must be enhanced through collaboration with partners, sharing of resources among parks and partners, focused training, and investment in personnel, equipment, facilities, and support.

GOAL: Maximize capacity of the ocean and Great Lakes parks to engage in stewardship activities

- Inventory existing NPS resources (personnel, equipment, facilities, cooperative partnerships) for natural and cultural resource initiatives, resource protection, planning, interpretation, and education. Prepare a resource directory for parks and partner agencies, including personnel, boats, facilities, and equipment. [NER, MWR, PWR/AKR] Create space on MWR Website to facilitate exchange within NPS. [MWR]
- Create ocean stewardship programs within Research Learning Centers, which could become centers of regional and national excellence on marine ecosystems or topics [NER, PWR/AKR] For example, rock-bound coastal ecosystems (Schoodic Education and Research Center, ACAD), sea-level rise and shoreline processes (Atlantic Research Center, CACO), urban coastal ecosystems (Jamaica Bay Institute, GATE), and ocean stewardship education (Conservation Studies Institute – Marsh Billings). [NER]
- The RLCs and CESUs will sponsor workshops, symposia, and training to enhance local knowledge of ocean issues; initiate ocean resource fellowship programs; and facilitate scientific research in parks. Focus areas include natural resources, marine archeology, maritime history, and coastal planning and policy. [NER, PWR/AKR]
- Cooperate with FLETC to host a coastal marine law enforcement training course to increase the capacity of parks to engage safely in marine-related enforcement activities that protect ocean resources. [NER, PWR/AKR]
- With the Ocean Park Stewardship Task Force, facilitate collaboration with regional inventory, mapping, and research programs of NOAA, USGS, and USEPA. [NER]
- Use existing NPS marine vessels (ranger boats) or concessionaire vessels (tour boats) to record ocean metrics, such as temperature, salinity, and pH, during normal operations. [PWR/AKR]
- Increase the use of special appointments (e.g. Schedule A) to assist parks in addressing oceans issues, including technical advice, proposal development, etc. [PWR/AKR]

GOAL: Increase the technical capacity for ocean exploration and stewardship

- Identify and prioritize ocean stewardship programs that require new investments in personnel, equipment, facilities, and/or support funds. Seek to fill these investments through NPS and partner sources. [NER, PWR/AKR]
- Prepare a feasibility study to establish a multi-agency (NPS, NOAA, USGS, US Coast Guard, etc.) National Ocean Center of Excellence with academic involvement to advance the seamless network concept and promote NPS marine exploration, protection, policy, and education goals. [NER, PWR/AKR] Pursue a Centennial Challenge Signature project to implement this action item at GATE's Sandy Hook Unit. [NER]
- Encourage the NRPC/WRD to pilot an "Aquatic Scientists in the Parks" program (similar to the GRD's "Geoscientists in the Parks." [MWR]
- Seek opportunities to obtain high quality, surplus boats from federal marine enforcement agencies. [NER, PWR/AKR]

GOAL: Enhance capacity of NPS dive teams in Great Lakes parks

- Increase support to dive teams to travel to parks for temporary assignments, to help maintain required certifications and training, and to increase dive team capacity and capabilities to support increased management initiatives. Consider the need for additional NPS divers. [MWR]
- Provide opportunities for dive teams to work together to monitor and protect submerged resources through joint training dives, projects, and NPS-specific training courses. [MWR]
- Work with the NPS National Dive Control Board to maintain dive programs at the highest levels of safety and efficiency, and streamline the 'dive reciprocity' process required to dive cooperatively with other agencies, academics, and volunteers. [MWR]

GOAL: Capitalize on NPS, partner, and citizen expertise to better protect and interpret park resources.

- Provide NPS staff with the skills and best practices needed to develop and maintain volunteers and citizen scientists. Support volunteer programs that enhance the base knowledge of park resources [PWR/AKR, MWR] For example, the Reef Check Program has a simple protocol (methodology), but is dependent on coral reef scientists to supervise site selection and data collection. [PWR/AKR]; Cuyahoga Valley National Park, Mississippi National River and Recreation Area, and the Great Lakes Research and Education Center. [MWR]
- Support NOAA's Sea Grant Program, which networks university marine researchers and provides outreach and education to park visitors. [PWR/AKR]
- Strengthen relationships among NPS programs and national parks in the Great Lakes region to create synergy between the Great Lakes I&M and the Great Lakes Research and Education Center through cooperative projects. [MWR]
- Increase the accessibility of the Great Lakes Research and Education Center. Solicit requests for assistance with education and/or research on submerged resources and stewardship. [MWR]
- Consider creating a Public Information Officer position to serve the Great Lakes parks. [MWR]
- Identify opportunities to co-locate NPS staff with cooperating agencies or academic institutions to enhance exchange of expertise and extend the technical capacity of NPS. [MWR]

GOAL: Explore new venues and tools for communicating about Great Lakes issues.

- Share crisis/spill response expertise and plans among Great Lakes parks. Trained personnel and equipment could augment response by USCG, USEPA, and local communities. [MWR]
- Convene an island national parks workshop to bring together managers and key staff to share best management practices and discuss challenges of stewardship and management. [MWR]
- Consider organizing a "Great Lakes National Parks" visit to Washington by superintendents and key staff to raise the profile of Great Lakes and oceans issues with WASO, DOI, key members of Congress and their staffs, and appropriate NGOs and other agencies. [MWR]

5. Moving the Strategic Plan Forward

The goals and action items that follow are addressed throughout the Strategic Plan, but they deserve special mention because of their broad significance and relevance to all of the Strategic Plan categories.

GOAL: Generate awareness among park managers on the significance of marine resources and protection responsibilities

- Design and implement a pilot Ocean Park Rapid Assessment Program that will include a 2-day park visit and follow-up assessment report to inform park managers about the Strategic Plan, characterize existing knowledge (e.g., jurisdictional authorities, natural and cultural marine resources, activities within marine boundaries, etc.), evaluate management issues, identify items (research, monitoring, protection, planning, education) needed for effective ocean stewardship goals, identify marine-related partners, etc. [NER, PWR/AKR]
- Use coastal watershed condition assessments to identify priority resource issues and information gaps. [NER, PWR/AKR]

GOAL: Evaluate the effectiveness of the Ocean Park Stewardship Strategy in conserving coastal and marine resources

- Develop a process to evaluate progress on ocean park stewardship throughout the Region. Establish criteria and metrics to measure progress, accomplishments, and success in natural and cultural resource conservation, enforcement and protection, planning, education, and interpretation. Establish a schedule for monitoring progress. [NER, PWR/AKR]
- Develop an interdisciplinary taskforce to advance the strategies outlined in the Strategic Plan. The taskforce will develop a 2-year implementation strategy that addresses high priority tasks and funding needs. [PWR/AKR]
- Engage the regional science programs to determine if an ocean advisor is needed. [PWR/AKR]
- Develop a mechanism for engaging state and territorial governments. [PWR/AKR]

GOAL: Understand and anticipate the role of ocean park stewardship within the urban corridor, given changing demography, development patterns, economies, and societal preferences

- Engage social scientists, demographers, planners, economists, and others to prepare papers that inform park managers on societal changes relevant to the ocean stewardship goals of the Strategic Plan. For long-term effectiveness, management actions to conserve ocean park resources must anticipate our changing society. [NER, PWR/AKR]

GOAL: Pursue funding opportunities to increase the technical capacity for ocean exploration and stewardship

- Parks authorized to collect recreational fees (Recreation Fee Enhancement Program) should consider using 80% funds to support ocean stewardship projects that have a direct visitor connection through interpretation and education, restoration of resources, health-and-safety improvements, and law enforcement. The Region will develop proposals to use 20% recreation fee funds to support ocean stewardship projects in non-fee collection parks. [NER, PWR/AKR]
- With the new flexible park base funding program associated with the National Park Centennial Initiative, the Region will prepare park-based proposals to focus on ocean-related needs identified in the Strategic Plan. [NER, PWR/AKR]
- Partnerships are fundamental to success of the Strategic Plan and fundamental to the National Park Centennial Initiative. The Region will pursue Centennial Challenge Signature projects that advance our understanding of ocean park resources through productive partnerships. [NER, PWR/AKR] For example, the National Ocean Center of Excellence at GATE developed an integrated program to inventory and map submerged natural and cultural resources, understand resource condition, and initiate protection strategies. [NER]